

LOWELL OBSERVATORY  
FLAGSTAFF, ARIZONA

Feb. 19, 1959

Dr. Joshua Lederberg  
Department of Genetics  
School of Medicine  
Stanford University  
Stanford, California

Dear Dr. Lederberg:

I am enclosing reprints of my work on the C-H band as well as a summary of the talk that I gave at Gainesville, Fla. along with a tracing of some of the new spectra obtained in October. The band at  $3.67 \mu$  was somewhat of an enigma at first since I had not seen it in any terrestrial plants. But I have now found it in the alga cladophora and it really appears to be caused by carbohydrates. The presence of oxygen on one of the carbon bands shifts the C-H resonance to this wavelength. It would seem that we have indication of carbohydrates on Mars but I am not prepared to say this definitely as yet.

I doubt that any improvement can be made from an earth satellite since the atmosphere is rather transparent here and since it has taken the 200-inch together with the best techniques available in order to do this work. A satellite about Mars may be useful, since only a rudimentary telescope will be required, and the other equipment can be made lightweight.

I have been studying the moon's surface with my equipment and have not found anything as yet.

Sincerely yours,

*W. M. Sinton*  
W. M. Sinton

enc.

WMS:mt

*Thank you very much.  
This is most helpful  
and exciting!  
I hope we have some chance  
soon to talk about archaeology  
in person. J. L.*

*Sinton, W. M.*